

IN THE SPECIFICATION

On page 1, line 4, please insert the following sentence:

A1 This invention was made with government support under Contract No. DK43888 by the National Institutes of Health. The government has certain rights in the invention.

IN THE CLAIMS

Please cancel claims 2-20.

Please add new claims 21-78 as follows:

21. A plant, comprising:

Sub B1 (a) plant cells containing nucleotide sequences encoding one or more biologically functional multimeric proteins not normally produced by the plant; and

(b) biologically functional multimeric proteins encoded by said nucleotide sequences.

22. The plant of claim 21 wherein the multimeric protein comprises a heteromultimeric protein.

A2 23. The plant of claim 21 wherein the multimeric protein comprises a homomultimeric protein.

24. The plant of claim 21 wherein the multimeric protein comprises a ligand binding polypeptide.

25. The plant of claim 24 wherein the ligand is an antigen.

26. The plant of claim 21 wherein the multimeric protein forms a binding site specific for a predetermined antigen.

124

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Cont'd.

27. The plant of claim 21 wherein the multimeric protein is an enzyme.

28. The plant of claim 21 wherein the multimeric protein is an abzyme.

29. The plant of claim 21 wherein the multimeric protein contains one or more disulfide bonds.

30. The plant of claim 21 wherein the multimeric protein is joined by hydrogen bonding.

31. The plant of claim 21 wherein the multimeric protein comprises an immunoglobulin product.

2 32. The plant of ~~claim 31~~ ^{claim 31} wherein the immunoglobulin product comprises an Fab.

3 33. The plant of ~~claim 31~~ ^{claim 31} wherein the immunoglobulin product comprises an Fab'.

4 34. The plant of ~~claim 31~~ ^{claim 31} wherein the immunoglobulin product comprises an F(ab')₂.

5 35. The plant of ~~claim 31~~ ^{claim 31} wherein the immunoglobulin product comprises an Fv.

6 36. The plant of ~~claim 31~~ ^{claim 31} wherein the immunoglobulin product comprises an antibody.

7 37. The plant of ~~claim 31~~ ^{claim 31} wherein the immunoglobulin product contains a paratope.

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38. The plant of claim 21 wherein the multimeric protein comprises a glycosylated immunoglobulin molecule free of sialic acid residues.

9 39. The plant of claim 21 wherein the plant is a dicotyledonous plant.

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Sub
¹⁰
~~40.~~ The plant of claim ~~41~~ wherein the plant is a monocotyledonous plant.

¹¹
~~41.~~ The plant of claim ~~41~~ wherein the plant is an alga.

¹²
~~42.~~ The plant of claim ~~41~~ wherein the multimeric protein includes a J chain.

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~~43.~~ A plant, comprising:

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(a) plant cells containing nucleotide sequences encoding an immunoglobulin product containing at least a portion of an immunoglobulin heavy chain; and

(b) biologically functional immunoglobulin product encoded by said nucleotide sequences.

Sub
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~~44.~~ The plant of claim ~~43~~ wherein the immunoglobulin product is a single-chain antigen-binding protein.

¹⁵
~~45.~~ The plant of claim ~~43~~ wherein the immunoglobulin product comprises an immunoglobulin heavy chain.

¹⁶
~~46.~~ The plant of claim ~~43~~ wherein the immunoglobulin product is capable of specifically binding to an antigen.

¹⁷
~~47.~~ The plant of claim ~~43~~ wherein the immunoglobulin product forms a binding site specific for a predetermined antigen.

¹⁸
~~48.~~ The plant of claim ~~43~~ wherein the immunoglobulin product is an antibody.

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~~49.~~ The plant of claim ~~43~~ wherein the immunoglobulin product comprises an Fab.

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~~50.~~ The plant of claim ~~43~~ wherein the immunoglobulin product comprises an Fab'.

187

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CONT'D
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~~51.~~ The plant of claim ~~43~~¹³ wherein the immunoglobulin product comprises an F(ab')₂.

22
~~52.~~ The plant of claim ~~43~~¹³ wherein the immunoglobulin product comprises an Fv.

23
~~53.~~ The plant of claim ~~43~~¹³ wherein the immunoglobulin product contains a paratope.

24
~~54.~~ The plant of claim ~~43~~¹³ wherein the immunoglobulin product comprises a V_H region.

25
~~55.~~ The plant of claim ~~43~~¹³ wherein the immunoglobulin product comprises one-half of an immunoglobulin molecule.

26
~~56.~~ The plant of claim ~~43~~¹³ wherein the immunoglobulin product comprises an antibody.

27
~~57.~~ The plant of claim ~~43~~¹³ wherein the plant is a dicotyledonous plant.

28
~~58.~~ The plant of claim ~~43~~¹³ wherein the plant is a monocotyledonous plant.

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~~59.~~ The plant of claim ~~43~~¹³ wherein the plant is an alga.

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~~60.~~ The plant of claim ~~43~~¹³ wherein the immunoglobulin product includes a J chain.

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~~61.~~ A plant, comprising:

(a) plant cells containing nucleotide sequences encoding one or more biologically functional glycopeptide multimers not normally produced by the plant; and

(b) biologically functional glycopeptide multimers encoded by said nucleotide sequences.

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~~62.~~ The plant of claim ~~61~~³¹ wherein the glycopeptide multimer includes a J chain.

128

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~~63~~. The plant of claim ~~31~~ wherein the glycopeptide multimer comprises a polypeptide having a glycosylated core portion and N-acetylglucosamine containing outer branches.

³⁴
~~64~~. The plant of claim ~~31~~ wherein the glycopeptide multimer comprises an antibody.

³⁵
~~65~~. A plant, comprising:
(a) plant cells containing nucleotide sequences encoding an immunoglobulin product containing at least a portion of an immunoglobulin light chain; and
(b) biologically functional immunoglobulin product encoded by said nucleotide sequences.

³⁶
~~66~~. The plant of claim ~~35~~ wherein the immunoglobulin product is a single-chain antigen-binding protein.

³⁷
~~67~~. The plant of claim ~~35~~ wherein the immunoglobulin product comprises one-half an immunoglobulin molecule.

³⁸
~~68~~. The plant of claim ~~35~~ wherein the immunoglobulin product comprises an immunoglobulin light chain.

³⁹
~~69~~. The plant of claim ~~35~~ wherein the immunoglobulin product is an abzyme.

⁴⁰
~~70~~. The plant of claim ~~35~~ wherein the immunoglobulin product comprises an Fab.

⁴¹
~~71~~. The plant of claim ~~35~~ wherein the immunoglobulin product comprises an Fab'.

⁴²
~~72~~. The plant of claim ~~35~~ wherein the immunoglobulin product comprises an F(ab')₂.

⁴³
~~73~~. The plant of claim ~~35~~ wherein the immunoglobulin product comprises an Fv.